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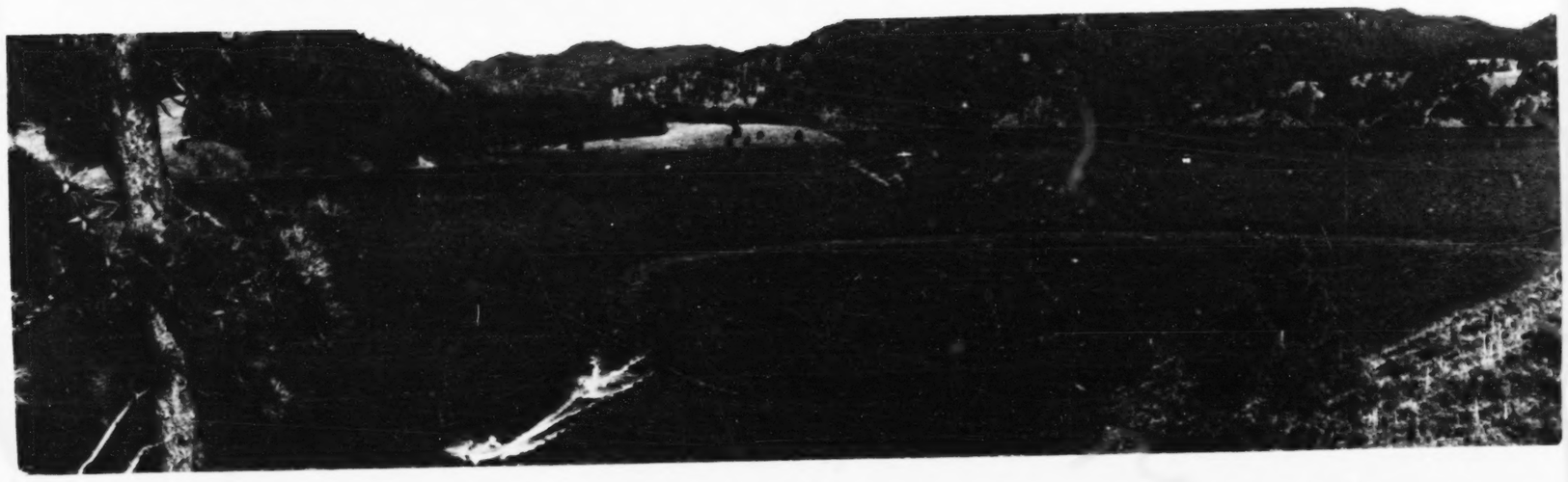
Pactola

U.S. Department of the Interior
Bureau of Reclamation

Water Resource Project
South Dakota



The area known as the Black Hills held great religious significance for the Western Sioux, Northern Cheyenne, and Arapaho Indian Nations. Few White men had reached the Black Hills country prior to 1874 when gold was discovered near Custer, which became a town in 1875. The gold rush led to the Sioux War of 1876 in which Crazy Horse defeated General George Armstrong Custer. A year later, the Sioux surrendered the Black Hills to the government, opening up a vast mining region and thousands of acres of grazing lands.

The land underlying Pactola Reservoir was the site of some of the earliest mining operations in the Black Hills. Prospectors came to Rapid Creek as early as July 1875, only to be removed by General George A. Crook. A year later the miners, followed by more fortune seekers, returned to their claims and named their first settlement "Camp Crook." In 1877 they renamed it "Pactola," an adaptation of "Pactolus," a river in ancient Lydia, meaning "gold-bearing sand."

Rapid City, founded in 1876, was the second city established in the Black Hills. The first railroad reached Rapid City in 1886 and settlement became general over this area soon after. The population of Rapid City has grown tremendously, and with this increase, demand for irrigation in the surrounding area has likewise increased.

Interest in developing the water resources of Rapid Creek was aroused by the realization that an additional source of municipal water was required to meet summer peaks and the pressing need of the Ellsworth Air Force Base for an adequate water supply. At the request of the Rapid City County Commissioners and numerous landowners, the Bureau of Reclamation completed an investigation of water needs in the valley of potential sites suitable for building a dam and reservoir to catch spring runoff and store it for use later in the year.

Development of the Rapid Valley Project was subsequently authorized by President Franklin D. Roosevelt in 1940. Construction began in November 1952 and was completed August 15, 1956. Municipal and irrigation water was first delivered on May 1, 1958.

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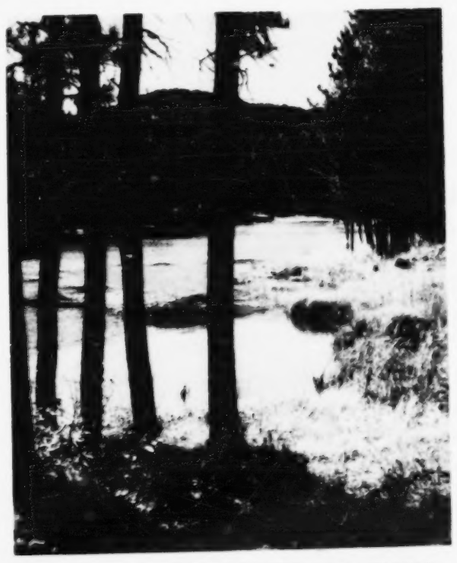
Recreation and Fish and Wildlife Benefits

Pactola Reservoir's 14 miles of pine-covered shoreline constitute some of the most impressive scenery in the region. Recreation facilities and the reservoir offer something for everyone. There are two campgrounds, three picnic areas, two boat ramps, 2 nature trails, and a visitor center featuring wildlife and geology exhibits. The U.S. Forest Service manages recreation areas and facilities at the reservoir.

The South Dakota Department of Game, Fish and Parks maintains an excellent fishery at Pactola Reservoir. Anglers may expect to catch kokanee salmon, large mouth bass, yellow perch, rock bass, and rainbow and brown trout. The Department stocks about 200,000 rainbow fingerlings in the reservoir every year. There is always the possibility of exceeding the state's record brown trout, weighing 22 pounds, 3 ounces, which was taken from Pactola in 1973.

Scenic attractions in the Black Hills area include Mount Rushmore National Memorial; Harney Peak, the highest point in the United States east of the Rocky Mountains; and rugged canyon areas, pine-covered slopes, and pleasant, open, grass-covered valleys. While traveling through these areas, it is possible to see whitetail deer, elk, buffalo, mountain goats, prairie dogs, and wild turkeys, plus a myriad of other species of wildlife common to the Black Hills.

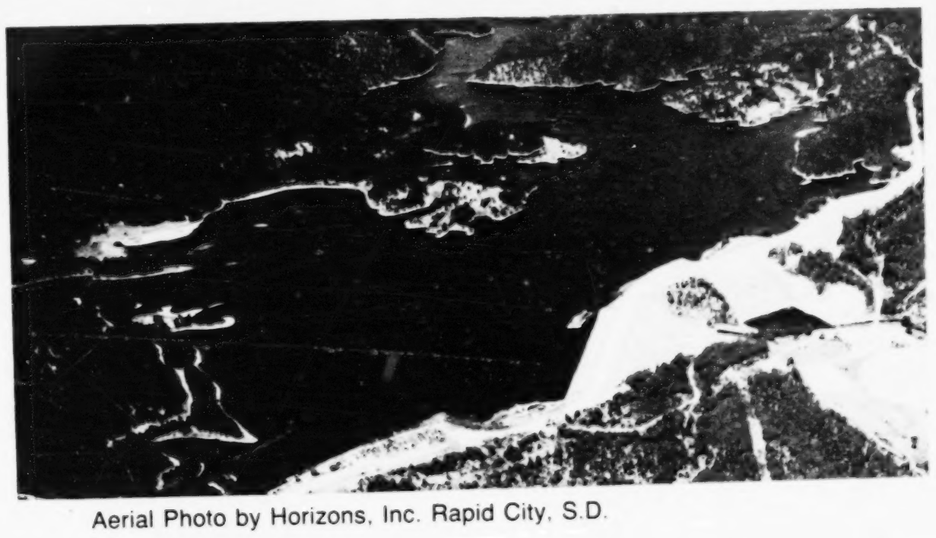
For further information on recreational opportunities, contact the U.S. Forest Service District Ranger Office, 803 Soo San Drive, Rapid City, South Dakota 57701.



Pine-covered slopes and grassy meadows by Pactola Reservoir are homes for wildlife.

Flood Control

Space in Pactola Reservoir amounting to 43,000 acre-feet has been designated as exclusive flood control storage. The reservoir provides flood protection along Rapid Creek and contributes to the control of the Cheyenne River in South Dakota and of the Missouri River. Flood control operations at Pick-Sloan Missouri Basin Program reservoirs are coordinated with the U.S. Army Corps of Engineers. The Corps issues instructions on release rates when storage rises into the exclusive flood control pool. Pactola Reservoir has prevented an estimated $1.1 million in flood damages since its construction.



Aerial Photo by Horizons, Inc. Rapid City, S.D.

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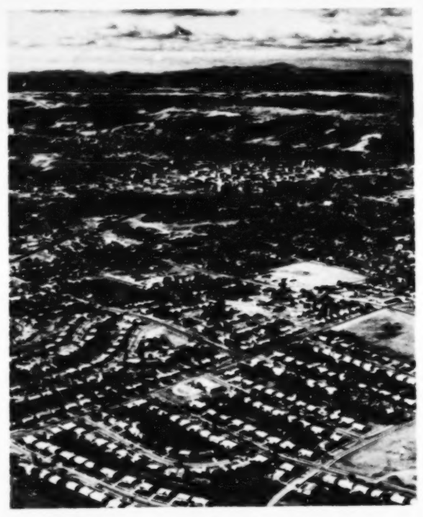
Uses of Pactola Water

Pactola Dam and Reservoir is operated in conjunction with Deerfield Dam and Reservoir on Castle Creek, a tributary of Rapid Creek. Both reservoirs supply a supplemental municipal water supply to Rapid City, including Ellsworth Air Force Base, and supplemental irrigation water to the 8,900-acre Rapid Valley Water Conservancy District.

Alfalfa is the major crop raised on the Rapid Valley Unit. Other irrigated crops include barley, oats, wheat, pasture, and forage such as hay and sorghum. Cumulative value of crops raised on the project through 1987 amounts to more than $20 million.



Rapid City . . . a growing, thirsty town

Water from Pactola is vital for crops in the Rapid Valley.

Boating is popular in the Black Hills area, and Pactola is a scenic retreat.

The fishing is great and many "big ones" lurk in these waters.

Physical Information on Dam and Reservoir

Dam

Type	Zoned earthfill
Height above foundation (ft)	245
Crest length (ft)	2,236
Crest width (ft)	40
Crest elevation (ft m.s.l.)	4,655
Total volume (cubic yds)	4,532,000

Spillway
Open-cut channel with 425 foot uncontrolled concrete crest. At surface elevation (4,651.7), water discharge capacity is 245,000 cubic feet per second.

Outlet Works
Reinforced concrete 8-foot-diameter horseshoe tunnel. Releases are controlled by two 2.75-by-2.75 foot high pressure hydraulic slide gates designed to pass water at a rate of 1,150 cubic feet per second.

Dikes
There are two earth and rock dikes north of the spillway with a total crest length of 2,963 feet.

Reservoir

Total Storage Capacity (at elevation 4621.5)
99,000 acre-feet[1]

Area at top of conservation storage pool (elevation 4580.2)[2]
860 acres

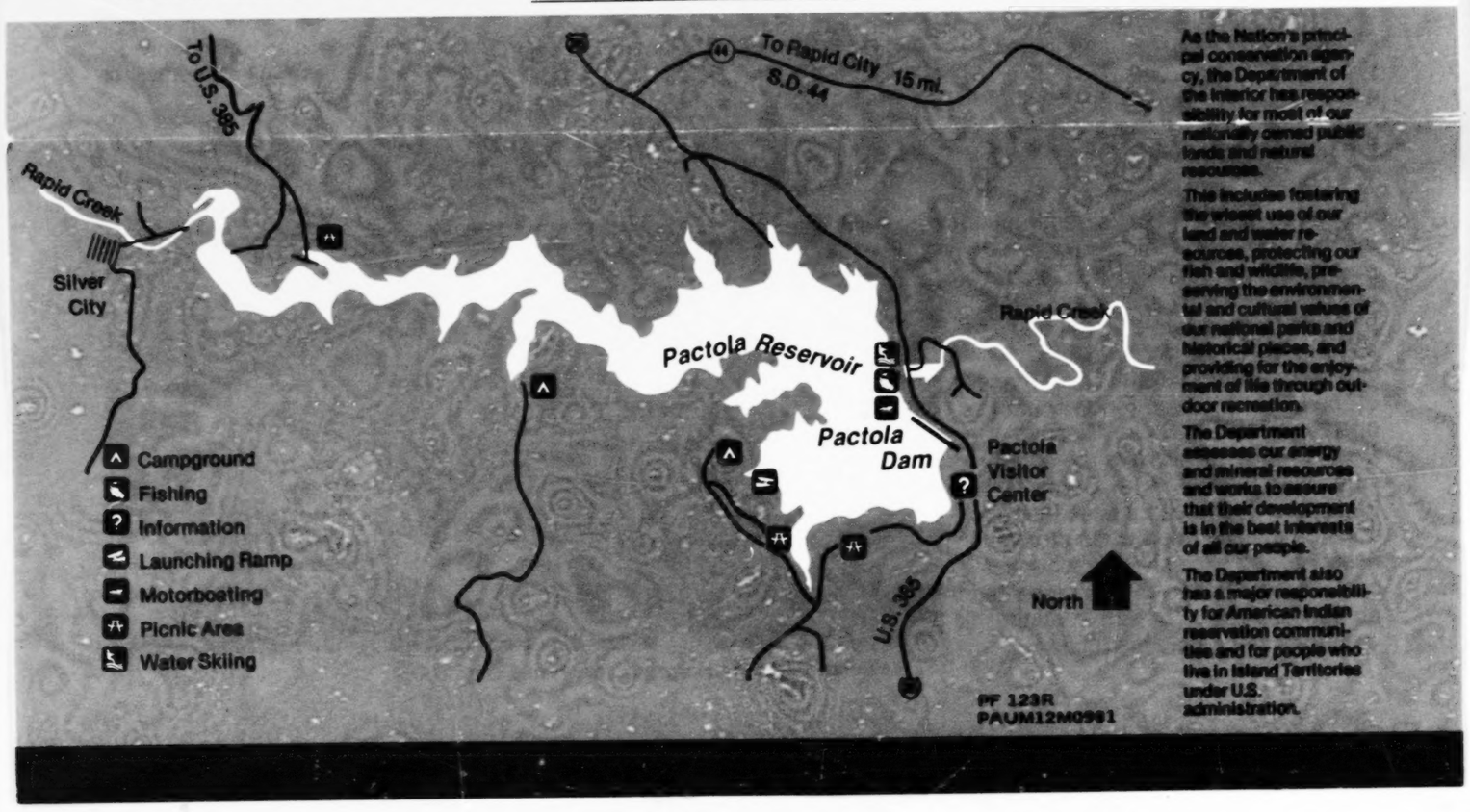
Surcharge pool water surface elevation
4,621.5 - 4,651.7 ft.

Exclusive flood control pool water surface elevation
4,580.2 - 4,621.5 ft.

Conservation storage pool water surface elevation
4,456.1 - 4,580.2 ft.

[1] An acre-foot of water would cover an acre of land one foot deep. It is equivalent to 326,000 gallons or enough to supply a family of 5 for one year.

[2] Top of conservation storage pool is the top of the normal operating level of the reservoir.



As the Nation's principal conservation agency, the Department of the Interior has responsibility for most of our nationally owned public lands and natural resources.

This includes fostering the wisest use of our land and water resources, protecting our fish and wildlife, preserving the environmental and cultural values of our national parks and historical places, and providing for the enjoyment of life through outdoor recreation.

The Department assesses our energy and mineral resources and works to assure that their development is in the best interests of all our people.

The Department also has a major responsibility for American Indian reservation communities and for people who live in Island Territories under U.S. administration.

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